

597

Claims

1 1. A ureteral stent for facilitating drainage from a kidney of a patient to a bladder of
2 the patient, comprising

3 an elongated portion having first and second ends defining a first portion of a
4 internal lumen extending there between, and having a length sufficient to extend
5 substantially within a ureter of the patient from the kidney to the bladder of the patient;

6 a retention portion extending from a first end of the elongated portion, defining a
7 second portion of the lumen, the second portion extending from the first portion and
8 defining at least one through aperture for providing fluid communication between the
9 lumen and the kidney, the retention portion being adapted for placement substantially
10 within the kidney and for retention of the placement; and

11 a mesh portion extending from a second end of the elongated portion, the mesh
12 portion being adapted for placement substantially within an intramural tunnel portion of
13 the ureter and for extending into the bladder, and being collapsible under radial
14 compression.

1 2. The stent of claim 1, wherein, the mesh portion includes an outer covering.

1 3. The stent of claim 2, wherein, the outer covering includes a polymer.

1 4. The stent of claim 3, wherein, the polymer includes polyurethane, polyamide,
2 silicone, or polyvinyl chloride.

1 5. The stent of claim 1, wherein, the mesh portion includes an inner lining.

1 6. The stent of claim 1, wherein, the mesh portion includes a resilient material.

1 7. The stent of claim 1, wherein, the retention portion includes a J-shaped hook
2 portion.

1 8. The stent of claim 1, wherein, the retention portion includes at least one loop
2 portion.

1 9. A ureteral stent for facilitating drainage in a urinary system of a patient,
2 comprising:

3 a mesh portion adapted for placement substantially within an intramural tunnel
4 portion of a ureter and for extension into a bladder of the patient and being collapsible
5 under radial compression.

1 10. The stent of claim 9, wherein, the mesh portion includes an outer covering.

- 1 11. The stent of claim 10, wherein, the outer covering includes a polymer.
- 1 12. The stent of claim 11, wherein, the polymer includes polyurethane, polyamide,
2 silicone, or polyvinyl chloride.
- 1 13. The stent of claim 9, wherein, the mesh portion includes an inner lining.
- 1 14. The stent of claim 9, wherein, the mesh portion includes a resilient material.
- 1 15. A ureteral stent for facilitating drainage from a kidney of a patient to a bladder of
2 the patient, comprising:
3 an elongated portion having first and second ends defining a first portion of a
4 lumen extending there between, and having a length sufficient to extend substantially
5 within a ureter from the kidney to the bladder of the patient;
6 a retention portion, extending from a first end of the elongated portion, defining a
7 second portion of the lumen, the second portion extending from the first portion and
8 defining at least one through aperture for providing fluid communication between the
9 lumen and the kidney, the retention portion being adapted for placement substantially
10 within the kidney and for retention of the placement; and
11 a coil portion extending from a second end of the elongated portion and
12 comprising a wound coil, the wound coil portion being adapted for placement
13 substantially within an intramural tunnel portion of the ureter and for extension into the
14 bladder, and being collapsible under radial compression.
- 1 16. The stent of claim 15, wherein, the wound coil includes an outer covering.
- 1 17. The stent of claim 16, wherein, the outer covering includes a polymer.
- 1 18. The stent of claim 17, wherein, the polymer includes polyurethane, polyamide,
2 silicone, or polyvinyl chloride.
- 1 19. The stent of claim 15, wherein, the wound coil includes an inner lining.
- 1 20. The stent of claim 15, wherein, the retention portion includes a J-shaped hook
2 portion.
- 1 21. The stent of claim 15, wherein, the retention portion includes at least one loop
2 portion.
- 1 22. A ureteral stent for facilitating drainage in a urinary system of a patient,
2 comprising:

3 a wound coil portion adapted for placement substantially within an intramural
4 tunnel portion of a ureter of the patient and for extension into a bladder of the patient, and
5 being collapsible under radial compression.

1 23. The stent of claim 22, wherein, the wound coil includes an outer covering.

1 24. The stent of claim 23, wherein, the outer covering includes a polymer.

1 25. The stent of claim 24, wherein, the polymer includes polyurethane, polyamide,
2 silicone, or polyvinyl chloride.

1 26. The stent of claim 22, wherein, the wound coil includes an inner lining.

1 27. A method of placing a ureteral stent in a patient, the method comprising:
2 providing a ureteral stent comprising;

3 an elongated portion having first and second ends defining a first
4 portion of a lumen extending there between, and having a length sufficient
5 to extend substantially within a ureter of the patient from a kidney of the
6 patient to a bladder of the patient;

7 a retention portion, extending from a first end of the elongated
8 portion, defining a second portion of the lumen, the second portion
9 extending from the first portion and defining at least one through aperture
10 for providing fluid communication between the lumen and the kidney, the
11 retention portion being adapted for placement substantially within the
12 kidney and for retention of the placement; and

13 a mesh portion extending from a second end of the elongated
14 portion, the mesh portion being adapted for placement substantially within
15 an intramural tunnel portion of the ureter and for extension into the
16 bladder, and being collapsible under radial compression;

17 inserting the ureteral stent into the ureter of the patient; and

18 positioning the ureteral stent in the patient with the retention portion substantially
19 within the kidney of the patient and the mesh portion substantially within the intramural
20 tunnel portion of the ureter and extending into the bladder.

1 28. A method of placing a ureteral stent in a patient, comprising:

2 providing a ureteral stent comprising;

3 an elongated portion having first and second ends defining a first portion
4 of a lumen extending there between, and having a length sufficient to extend
5 substantially within a ureter of the patient from a kidney to a bladder of the
6 patient;

7 a retention portion extending from a first end of the elongated portion,
8 defining a second portion of the lumen, the second portion extending from the
9 first portion and defining at least one through aperture for providing fluid
10 communication between the lumen and the kidney, the retention portion being
11 adapted for placement substantially within the kidney and for retention of the
12 placement; and

13 a coil portion extending from a second end of the elongated portion and
14 including a wound coil, the wound coil being adapted for placement substantially
15 within an intramural tunnel portion of the ureter and for extension into the
16 bladder, and being collapsible under radial compression;

17 inserting the ureteral stent into the ureter of the patient; and

18 positioning the ureteral stent in the patient with the retention portion substantially
19 within the kidney of the patient and the wound coil substantially within the intramural
20 tunnel portion of the ureter and the bladder.